

SUB A1 > 1. A method of performing a pre-paid electronic-
2 commerce transaction for a user having a personal
identification number (PIN), the method comprising the steps
4 of:

receiving a request for goods or services from the user
6 and creating a transaction instance;

retrieving account information relating to the user's
8 PIN, including the user's remaining balance;

determining whether or not the transaction can take place
10 as a function of the user's remaining balance;

proceeding with the transaction and servicing the request
12 if the user's account is sufficiently funded;

generating an unrated service data record;

14 calculating the purchase price of the requested goods or
services based upon the service data record;

16 updating user's remaining balance; and

generating or updating a transaction data record.

2. The method of claim 1, wherein the transaction
2 occurs over the internet.

3. The method of claim 1, wherein the transaction
2 occurs over an intranet.

4. The method of claim 1, wherein the transaction

2 occurs over an extranet.

5. The method of claim 1, wherein the request is
2 received through a point-of-sale (POS) terminal.

Sub A2
6. The method of claim 1, further including the step
2 of:
denying further service requests when a predetermined
4 threshold is reached, thereby enforcing usage limits.

Sub B2
7. The method of claim 1, wherein the input device
forms part of a web page.

8. The method of claim 1, wherein the input device is
2 a virtual device.

9. The method of claim 8, wherein the virtual device
2 allows the user to:
select a pre-paid method of payment, and
4 enter the user's PIN and password.

Sub B3
10. The method of claim 1, wherein the step of
2 calculating the purchase price of the requested goods or
services occurs in real time.

11. The method of claim 10, wherein the purchase price
2 is a dollar or less.

Sub B4
~~12. The method of claim 1, wherein:
the steps associated with receiving the request from the
user and servicing the request are performed at a first
4 location; and
one or more of the other steps are performed at one or
6 more different locations.~~

13. The method of claim 12, wherein one of the different
2 locations is associated with requesting a payment, and wherein
that location passes accounting and rating information to the
4 first location.

Sub B5
~~14. The method of claim 1, further including the step of
2 providing the user with an estimated purchase price before a
purchase is made.~~

15. The method of claim 1, further including the step of
2 providing the user with a history of payments.

16. The method of claim 1, further including the step of
2 allowing the user to move funds from a bank or credit card
account to increase the remaining balance.

17. The method of claim 1, wherein the input device
2 forms part of a personal digital assistant.

SUB A3 } 18. An architecture facilitating e-commerce
2 transactions, comprising:

a) an input device for receiving a request for goods or
4 services from a user having a personal identification number
(PIN);

6 b) an account device for performing account-management
functions, including account balance and PIN verification
8 operations;

c) a rating device for calculating the price of the
10 requested goods or services;

d) a service device for fulfilling the request;

12 e) an output device for maintaining one or more
transaction data records; and

14 f) a transaction manager coordinating the operations of
a) through e).

19. The architecture of claim 18, including transactions
2 which occur over the internet.

20. The architecture of claim 18, including transactions
2 which occur over an intranet.

21. The architecture of claim 18, including transactions
2 which occur over an extranet.

22. The architecture of claim 18, including transactions
2 which originate at a point-of-sale (POS) terminal.

23. The architecture of claim 18, wherein the input
2 device is an internet web page.

24. The architecture of claim 23, wherein the ^{input}~~virtual~~
2 device allows the user to:

select a pre-paid method of payment, and
4 enter the user's PIN and password.

25. The architecture of claim 18, wherein at least the
2 rating device and the service device support micropayments.

26. The architecture of claim 18, wherein the input
2 device and the service device are disposed at a first
location, and one or more of the other devices are disposed at
4 one or more different locations.

27. The architecture of claim 18, wherein the rating
2 device is operative to provide the user with an estimated

purchase price before a purchase is made.

28. The architecture of claim 18, wherein the input
2 device is operative to provide the user with a history of
payments.

SUB A4
29. The architecture of claim 18, wherein the output
2 device supports multiple service data record queues.

30. The architecture of claim 18, wherein the account
2 device is operative to move funds from a bank or credit card
account to increase the remaining balance.

31. The architecture of claim 18, wherein the input
2 device forms part of a personal digital assistant.

32. A method of performing a pre-paid electronic-
2 commerce transaction, comprising the steps of:

- a) providing the architecture of claim 18;
- 4 b) receiving a request from a user through the input
device;
- 6 c) creating a transaction instance through the
transaction manager;
- 8 d) performing PIN authorization, lock and remaining
balance retrieval through the account device;

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- 10 e) invoking the rating device to determine whether or
not the transaction can take place given the user's remaining
12 balance;
- f) proceeding with the transaction through the service
14 device if the PIN is sufficiently funded;
- g) fulfilling the request if the PIN is sufficiently
16 funded;
- h) returning an unrated service data record through the
18 service device;
- i) calculating a purchase price using the rating
20 device;
- j) updating the PIN balance and unlocking the PIN using
22 the account device; and
- k) creating multiple TDR queues.

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